LE "LOUIE" CAI

me@louiecai.com • (475) 298-7585 • San Diego, CA • Website • LinkedIn

EDUCATION

University of California, San Diego, Data Science B.S.   **Sept 2020 – June 2024**

- **GPA**: 3.77
- **Relevent Coursework**: Machine Learning, Deep Learning, NLP, Data Analysis, Computer Organization and Systems Programming, Data Structures & Object-Oriented Design, Differential Equations, Linear Algebra, Probability and Statistics, Discrete Mathematics, Components and Design Techniques for Digital Systems

SKILLS

- **Programming Languages**: Python, R, SQL, Java, C, C++, C#, Bash, HTML, CSS, Typescript
- **Machine Learning/Big Data**: Machine Learning, Deep Learning, pandas, NumPy, matplotlib, scikit-learn, PyTorch, BeautifulSoup4, Request, Selenium, Plotly, FastAPI
- **Framework/Tools**: React, JavaFX, Unity, Linux, Docker, Blender, Gradle, Vim, Git, Jupyter

EXPERIENCE

Amazon   **June 2023 - Spetember 2023**

Software Development Engineer Intern
- Leveraged React and TypeScript to develop a front-end internal tool, automating and optimizing backend database onboarding processes
- Collaborated in an Agile team to design responsive and intuitive user interfaces, ensuring a seamless experience across devices.
- Utilized Git for version control, contributing to the optimization of tool performance and achieving improved loading times.

PROJECTS

Convolutional Neural Network Image Classification   **Feb 2022**

- Developed a custom convolutional neural network with PyTorch to classify 20 categories of food images
- Constructed and trained the neural net with PyTorch and cuda; optimized the network through changing the architecture and the hyperparameters
- Graphed and analyzed the feature maps and the filters with matplotlib

Twitter Sentiment Analysis API   **July 2022**

- Developed a configurable LSTM model to classify the sentiment of Twitter tweets into different categories and created an API that returns a response JSON object of the sentiment result with FastAPI
- Trained 1000 different LSTM models with grid search to find the optimal hyperparameters

Minecraft Mod Development   **June 2020 – Dec 2020**

- Over **2.9M** downloads on CurseForge
- Developed a plugin that improves/expands the player experience by adding items to interact with in Minecraft
- **Technical Skills**: coded in Java under the Minecraft Forge framework and compiled with Gradle.

Tiktok Reddit Video Automator   **Aug 2022 - Now**

- Created a Python script that downloads hottest videos from subreddits with the Reddit API and uploads them to tiktok accounts with Python and Selenium
- Deployed to a server and posted videos automatically with configurable settings (rest interval, target subreddit, etc.)

ACTIVITIES

IEEE F1TENTH IV2023 Championship - Anchorage   **Jan 2023 - Now**

- Built two autonomous 1/10 scale RC cars that can navigate a racetrack with a LiDAR sensor and a camera
- Developed and trained the algorithms for the car to navigate the track with ROS2 and DonkeyCar
- Represented UC San Diego and won fourth place in the championship